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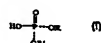
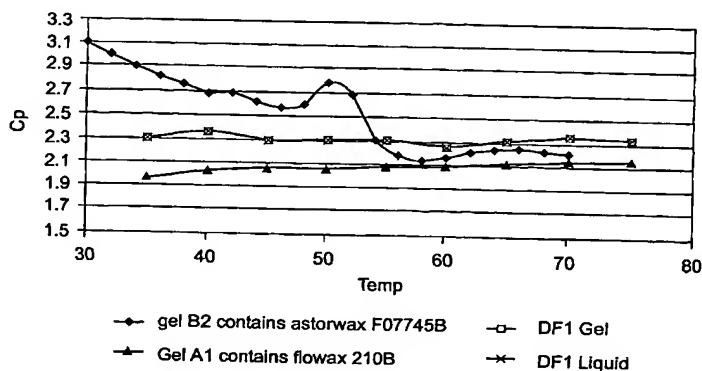
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(54) Title: METHOD



(57) Abstract: A method of insulating pipeline bundles used in recovering hydrocarbons from wells is disclosed. A (5) polymeric substance, such as an orthophosphate ester (6) according to formula I, is injected into the annulus (7) between a carrier pipe and the hydrocarbon conveying 8 tubulars. A ferric salt, such as ferric sulphate, (9) is added as a gelling agent. An alternative embodiment uses (4)-(4 ormylphenylethenyl)-(1)-ethylpyridinium methosulphonate (SbQ) cross linked with polyvinyl alcohol in acidic conditions to form a gel. The mixture results in a gel having a dynamic viscosity of greater than (1000) PaS. The gel insulates the inner hydrocarbon-conveying tubulars from the surrounding seawater thus helping to maintain the relatively high temperature therewithin. This in turn reduces the likelihood for chemicals, such as hydrates, to be precipitated out of the oil phase.

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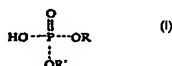
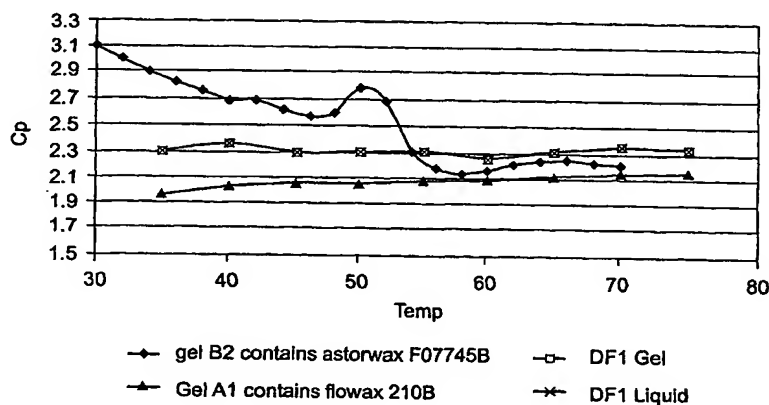
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(54) Title: METHOD OF THERMALLY INSULATING PIPES



(57) Abstract: A method of insulating pipeline bundles used in recovering hydrocarbons from wells is disclosed. A (5) polymeric substance, such as an orthophosphate ester (6) according to formula (I), is injected into the annulus (7) between a carrier pipe and the hydrocarbon conveying 8 tubular. A ferric salt, such as ferric sulphate, (9) is added as a gelling agent. An alternative embodiments uses (4)-(4 ormylphenylethenyl)-(1)- ethylpyridinium methosulphonate (SbQ) cross linked with polyvinyl alcohol in acidic conditions to form a gel. The mixture results in a gel having a dynamic viscosity of greater than (1000) PaS. The gel insulates the inner hydrocarbon-conveying tubulars from the surrounding seawater thus helping to maintain the relatively high temperature therewithin. This in turn reduces the likelihood for chemicals, such as hydrates, to be precipitated out of the oil phase.



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